

### 3.3 Existing Transportation System

An important stage in the development of a transportation plan is the analysis of the existing roadway system and its ability to serve the area's travel desires. Emphasis is placed not only on detecting the existing deficiencies, but also on understanding the causes of these deficiencies. Travel deficiencies may be localized, resulting from problems with inadequate pavement width, intersection geometry, or intersection controls. Travel deficiencies may also result from system problems, such as the need to construct missing travel links, bypass routes, loop facilities, or additional radial routes.

An analysis of the roadway system looks at both current and future travel patterns and identifies existing and anticipated deficiencies. This is usually accomplished through a traffic crash analysis, roadway capacity deficiency analysis, and a system deficiency analysis. This information is used to analyze factors that will impact the future system, including population growth, economic development potential, and land use trends. For more information, see **Figures 4 and 5**.

### 3.4 Bridge Conditions

Bridges are an important element of a highway system. If a bridge is not up to safe design standards it can decrease the efficiency of the entire transportation system. Therefore, bridges must be constructed to the same, or higher, design standards as the rest of the system and must be inspected regularly to ensure the safety of the traveling public.

The NCDOT Bridge Maintenance Unit inspects all bridges in North Carolina at least once every two years. A sufficiency rating for each bridge is calculated and establishes the eligibility and priority for replacement. Bridges having the highest priority are replaced as Federal and State funds become available. A bridge is considered deficient if it is either Structurally Deficient or Functionally Obsolete. A bridge at least ten years old is considered structurally deficient if it is in relatively poor condition or has insufficient load-carry capacity due to either the original design or to deterioration. The bridge is considered functionally obsolete if it is narrow, has inadequate under-clearances, has insufficient load-carrying capacity, is poorly aligned with the roadway, and/or can no longer adequately serve existing traffic.

A bridge must be classified as deficient in order to qualify for Federal replacement funds. In addition, the bridge must have a certain sufficiency rating to qualify for these funds. To qualify for replacement, the sufficiency rating must be less than 50%; for rehabilitation, the sufficiency rating must be less than 80%. Deficient bridges within Warren County are given in **Table 2**.